

## Stocking Recommendations

Stocking rates for triploid grass carp depend on the amount of aquatic plant control desired, and the type of vegetation to be controlled. New ponds should not be stocked with triploid grass carp and the Agency will not issue permits for new ponds. Food preferences for grass carp are variable, but studies have documented their dislike for woody-stemmed plants such as lily pads and cattails. Stocking grass carp for control of these nuisance aquatic plants is not recommended. It is also publicized that plants such as duckweed and water meal are not readily eaten by these fish. Grass carp are recommended for plants illustrated in Figure 1. For correct identification of the category of aquatic plant (floating, emergent, submergent, etc.), please refer to the DGIF website ([www.dgif.virginia.gov](http://www.dgif.virginia.gov)) or contact your local fisheries biologist.

Pond owners need to keep in mind that every pond or lake is a dynamic system with unique conditions. Water quality (alkalinity, dissolved oxygen, pH, and temperature), vegetation, and aquatic organisms present can be quite variable between water bodies and response to the following recommendations may vary. For control of aquatic vegetation, use the following formula to determine the number of triploid grass carp to stock. First determine the acreage of your pond. Secondly, determine the degree of aquatic plant infestation in your pond (Slight <30%; Moderate 30-60%; Heavy >60%). Recommended stocking rates for each category of aquatic plant infestation are as follows to control vegetation: **Slight (2 fish/acre), Moderate (5 fish/acre), Heavy (10 fish/acre)**. If complete eradication of vegetation is desired, triploid grass carp should be stocked at a rate of 15 fish/acre (this is the maximum stocking rate; the Agency will not issue permits for more than 15/acre). In ponds smaller than 1 acre, it is recommended that a minimum of 3 triploid grass carp be stocked to account for any potential mortality or predation of newly stocked fish. Examples of stocking rates follow:

**Example #1** - If your pond is 5 acres in size and 50% covered (Moderate infestation) with hydrilla you would like to control, calculate your stocking rate by multiplying 5 acres x 5 fish/acre (Moderate infestation) = 25 triploid grass carp to stock.

**Example #2** - You have a 1 acre pond with 30% (Slight infestation) coverage of elodea you would like to control, calculate your stocking rate by multiplying 1 acre x 2 fish/acre (Slight infestation) = 2 triploid grass carp, but go ahead and order the minimum of 3 triploid grass carp to stock.

If desired results are not achieved after the **second** year, additional fish should be added at one half of the initial stocking rate.

An effective program requires monitoring and evaluation. If total plant eradication is your management objective, monitoring the results is straightforward. Your approach is successful if all vegetation is removed. Eventually, more fish will need to be stocked if plant growth returns to undesirable levels. Restock triploid grass carp at 3 fish per acre to maintain control, and 5 fish per acre to keep the pond or lake devoid of vegetation.

Figure 1 Triploid grass carp stocking rates that will have success controlling common aquatic plant problems in Virginia

	Control	Eradiation
No. of fish per vegetated acre	8	16

Examples:

